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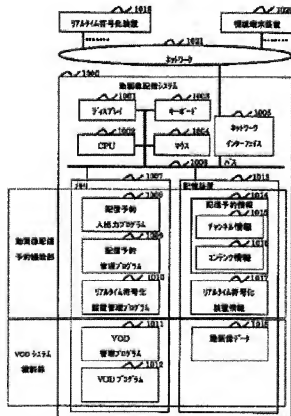
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Abstract:

PROBLEM TO BE SOLVED: To enable a delivery of contents in a preset time zone without distinguishing storage contents from live contents and to preferentially deliver the contents for a viewing and listening requests of the storage contents from a viewer.SOLUTION: A delivery system of the contents comprises functions of starting and stopping a real time encoder, delivery reserving functions of forming desired delivery set information and setting the time zone for delivering the storage contents or the live contents at each delivery set information, a function capable of delivery reserving the delivery setting or delivery reserving relating to the delivery setting in the delivery reserving management via a network, and a function capable of setting and displaying the delivery reserving in the delivery reserving management only on a designated day.

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JPO Machine translation abstract:

(57) Abstract

SUBJECT The contents can be distributed in the time zone set up beforehand, without distinguishing storage system contents and live system contents, and priority is given to the viewing-and-listening demand of the storage system contents from a televiewer, and the contents are distributed.

Means for Solution A function and desired sets distribution information that real-time coding equipment is started and stopped are created, A distribution reservation function to set up a time zone which distributes storage system contents and live system contents for every sets distribution information of the, A function in which distribution reservation related with sets distribution or its sets distribution in the distribution reservation management can be performed via a network, and a function which can be performed only about a day which specified setting out and a display of distribution reservation in the distribution reservation management are equipped.

Claim(s)

Claim 1 A distribution system which distributes storage system contents characterized by comprising the following memorized beforehand, and live system contents processed by real-time coding equipment.

A means to carry out reservation setting of the time zone beforehand, and to distribute said storage system contents and live system contents to a televiewer.

A means to give priority to said viewing-and-listening demand regardless of said setting out, and to distribute specified storage system contents to a viewing-and-listening demand to storage system contents from a televiewer.

Claim 2 A distribution system of the contents according to claim 1 characterized by comprising the following.

The distribution bit rate of said contents, a distribution protocol, a means to create one or more sets distribution information which comprises a distribution destination.

A means which carries out reservation setting of the time zone which distributes storage system contents or live system contents for said every sets distribution information beforehand.

Claim 3 A distribution system of the contents according to claim 1 or 2, wherein said reservation setting is performed via a network.

Claim 4 A means to distribute storage system contents and live system contents to a televiewer in order to realize the contents distribution system according to claim 1 or 2, A means to give priority to and distribute storage system contents specified regardless of said setting out to a viewing-and-listening demand to storage system contents, A recording medium storing a processing program which realizes each of a means to create sets distribution information, and a means which carries out reservation setting of the time zone which distributes storage system contents or live system contents for every sets distribution information beforehand.

Detailed Description of the Invention

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Field of the Invention This invention relates to the storage which stored the distribution system and message distribution processing program of contents, and distribute contents, such as video, to a televiewer especially according to reservation setting, and. It is related with the distribution system of the contents which distribute the contents demanded regardless of distribution reservation to the viewing-and-listening demand from a televiewer to recorded contents already.

0002

Description of the Prior Art The storage system contents in which the present television broadcasting and a radio broadcast are mentioned a priori like a drama and which are broadcast according to a broadcasting-hours belt, Contents are changed and broadcast according to the broadcasting-hours belt which was able to determine the live system contents which broadcast the video photoed with the camera according to the broadcasting-hours belt like news as it is in real time. For this reason, regardless of the kind of those contents, a televiewer receives that broadcast

with television or radio, and is viewing and listening to video and a sound.

0003On the other hand, on the Internet, the WEB server which provides all the places in the world with various information using World Wide Web (WWW) is installed now.

The user in whom an Internet access is possible accesses the WEB server which wants to acquire information always using the information inspection software called a WEB browser, and if he is a low bit rate besides a text, a still picture, and a sound, he can access the information on video etc.

0004Also in public institutions in connection with use increase of such the Internet and WWW, such as a company and a university, The computer network called the intranet which introduced the tool and WWW standards of the Internet which spread through the network in a section, an enterprise network, and the whole intramural network has been built quickly. WEB by which intranet is connected to the network in a company and a university It is built by the server and to the WEB server. Documents, such as an indicator of the technical support information of a company or a company, a procedure manual, and a telephone directory, are saved, and the user can access all the information of a company or a university by perusing the document on the WEB server using a WEB browser.

0005In a situation which was mentioned above, it follows on progress of the transmission art of video and compression technology, Computer networks, such as intranet and the Internet, are used and development of the video-on-demand (henceforth VOD) system which enabled it to view and listen to video to see when a user wants to see has been furthered. And the user who uses this VOD system, By accessing the page in which the video list which can provide the VOD system of a WEB server is stored by the WEB browser, and choosing one of the contents to view and listen from the list of video on the page, when viewing and listening, Distribution of video can be received from a WEB server.

0006However, a WEB server is difficult to transmit the video of a number Mb/s grade or the high bit rate beyond it to real time via a network for the reasons of that distribution of video is not the 1st purpose, a network throughput having a limit.

0007Then, the VOD system which separated the WEB server holding the video list which can provide a VOD system, and the VOD server which actually distributes video is indicated to them and proposed by JP,11-88862,A etc. in recent years, for example. By the user who uses this VOD system accessing a WEB server by a WEB browser, perusing a video list, and choosing dynamic image data to see out of it, Transmission of only information can be received from the VOD server which distributes the video, and the call of video can be realized promptly.

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Problem(s) to be Solved by the InventionThere are the following problems in this conventional technology.

0009In the conventional technology mentioned above, television broadcasting and a radio broadcast, Are only distributing contents, such as video, to a designated time belt, have the problem that contents cannot be distributed according to a televiewer's viewing-and-listening demand, and a VOD system, According to the viewing-and-listening demand from a televiewer, it is only distributing video and has the problem that contents cannot be distributed according to the schedule decided beforehand.

0010Without distinguishing storage system contents and live system contents, according to the distribution reservation set up beforehand, can distribute the purpose of this invention to a televiewer, and it receives a viewing-and-listening demand to the storage system contents from a televiewer, It is in providing the distribution system of the contents which made it possible to give priority to the viewing-and-listening demand regardless of the distribution reservation, and to distribute the storage system contents.

0011The purpose of this invention The distribution bit rate of video, a distribution protocol, Sets distribution (the following, channel), such as a distribution destination, is created, and it is in providing the contents distribution system which has a distribution reservation setting up function which sets up beforehand the time zone which distributes storage system contents and live system contents for every channel.

0012When the purpose of this invention performs the distribution reservation setting out, it has the function to set up the distribution reservation related with a channel or its channel via the network, and. It is in providing the contents distribution system which has a function performed

only about the day which specified setting out and a display of distribution reservation.

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Means for Solving the ProblemIn a distribution system with which said purpose distributes storage system contents memorized beforehand and live system contents processed by real-time coding equipment according to this invention, A means to carry out reservation setting of the time zone beforehand, and to distribute said storage system contents and live system contents to a televiewer, By having a means to give priority to said viewing-and-listening demand regardless of said setting out, and to distribute specified storage system contents, to a viewing-and-listening demand to storage system contents from a televiewer, The distribution bit rate of said contents, a distribution protocol, and a means to create one or more sets distribution information which comprises a distribution destination, It is attained by having a means which carries out reservation setting of the time zone which distributes storage system contents or live system contents for said every sets distribution information beforehand.

0014By having the above-mentioned composition, this invention can distribute the contents in a time zone set up beforehand, without distinguishing storage system contents and live system contents, and to a viewing-and-listening demand to storage system contents from a televiewer, priority can be given to it and it can distribute the contents.

0015Each means mentioned above can be built with a processing program on a computer, and can be installed in a computer through a medium of various gestalten, such as memory storage by various kinds of disk type recording media, a semiconductor memory device, and a communication network.

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Embodiment of the InventionHereafter, a drawing explains the embodiment of the distribution system of the contents by this invention in detail.

0017Drawing 1 is a block diagram showing the composition of the contents distribution system by one embodiment of this invention. The embodiment of this this invention applies this invention to distribution of video. In drawing 1, a video distribution system and 1001 display 1000, CPU and 1003 for 1002 a keyboard and 1004 a mouse and 1005 A network interface, 1006 a bus and 1007 a memory and 1008 A distribution reservation I/O program, A distribution reservation control program and 1010 1009 A real-time coding equipment control program, 1011 a VOD control program and 1012 a VOD program and 1013 Memory storage, 1014 -- distribution reservation information and 1015 -- as for dynamic image data and 1019, contents information and 1017 are a **viewing-and-listening terminal unit and 1021** networks real-time coding equipment and 1020 real-time coding equipment information and 1018 channel information and 1016.

0018As shown in drawing 1, the video distribution system 1000, The display 1001 which is an output device, The network interface 1005, command which are the interfaces for input and output for the keyboard 1003, the mouse 1004, and the video distribution system 1000 which are CPU1002 for system control and an input device to perform transmission and reception for data with an external device. Or it has the memory 1007 which memorizes the program for performing processing by bus **for delivering and receiving data** 1006, and CPU1002, etc., and the memory storage 1013 which stores various processing data, and is constituted. And this video distribution system 1000, The video acquired from imaging devices, such as a camera, one by one And the real-time coding equipment 1019 coded in an instant. It is connected with the viewing-and-listening terminal unit 1020 which has information reading means, such as a WEB browser used when a televiewer views and listens to (it being hereafter called RTE) and the video which the video distribution system 1000 provides, by the networks 1021, such as the Internet. The dotted line currently described in the viewing-and-listening terminal unit 1020 grade shows that two or more these devices are able to exist.

0019It is stored in the memory storage 1013, and according to the command of CPU1002, it is transmitted to the memory 1007, and the processing program for performing the function about this invention is stored in it. These programs are classified into two, a video distribution reservation function part and a VOD system-function part, according to a function. A video distribution reservation function part is constituted by the three programs 1008, i.e., a distribution reservation I/O program, the distribution reservation control program 1009, and the real-time coding equipment control program 1010. A VOD system-function part is constituted by two programs of the VOD control program 1011 and the VOD program 1012. The distribution reservation

information 1014 which consists of the channel information 1015 and the contents information 1016, the real-time coding equipment information 1017, and the dynamic image data 1018 are stored in the memory storage 1013.

0020Above-mentioned distribution reservation I/O program 1008, Set up new production, change, deletion, etc. to the real-time coding equipment control program, the two programs 1009, i.e., the distribution reservation control program, which are mentioned later, 1010, and distribution reservation. It is a program which controls the display which can recognize the distribution reservation setting condition clearly, and is a program which provides the dialog environment of an administrator and a graphic display system.

0021The distribution reservation control program 1009 holds distribution reservation setting out from distribution reservation I/O program 1008, It is a program to which communicate with the VOD system-function part which comprises two programs, i.e., the VOD control program 1011 and the VOD program 1012, later mentioned according to the distribution reservation setting out, and a start and end of video distribution are made to carry out. Distribution reservation setting out from distribution reservation I/O program 1008 is stored in the distribution reservation information 1014 on the memory storage 1013. The distribution reservation information 1014 is divided and stored in the contents information 1016 which is information, including the channel information 1015 which describes the channel which is sets distribution peculiar to a VOD system-function part, the actually distributed storage system contents, and live system contents, peculiar to contents.

0022The real-time coding equipment control program 1010 is a program which replies the RTE setup information which held setting out about RTE from distribution reservation I/O program 1008, and was specified according to the demand from the distribution reservation control program 1009. The RTE setup information from distribution reservation I/O program 1008 is stored in the real-time coding equipment information 1017 on the memory storage 1013.

0023The VOD control program 1011 which constitutes a VOD system-function part is a program which is performing management at the time of providing the service which distributes the dynamic image data 1018 stored to the viewer who emitted the viewing-and-listening demand. The VOD control program 1011 has managed not only the management about the viewer who emitted the viewing-and-listening demand but the distribution start and terminating request from the distribution reservation control program 1009 of the video distribution system 1000.

0024The VOD program 1012 is a program which actually distributes the dynamic image data 1018 according to the directions from the VOD control program 1011.

0025The video distribution system 1000, When CPU1002 performs processing according to distribution reservation I/O program 1008 mentioned above, the distribution reservation control program 1009, the real-time coding equipment control program 1010, the VOD control program 1011, and the VOD program 1012. The function about this invention is performed.

0026Next, the composition of the table which stores various kinds of information used by each program mentioned above in processing by the embodiment of this invention is explained.

0027The figure showing the composition of the table where drawing 2 stored the component of the channel information 1015, The figure showing the composition of the table where drawing 3 stored the component of the RTE information 1017, The figure and drawing 5 in which the composition of the table where drawing 4 stored the component of the contents information 1016 of storage system contents and live system contents is shown are a figure showing the composition of the table which stored the initialization setting means of RTE in the contents information 1016 of live system contents.

0028As shown in drawing 2, the channel information 1015, A channel. The channel name 1601 for identifying, and contents. The system name in which the VOD program 1012 to distribute works. distribution IP address 1605 at the time of distributing with the distribution protocol 1604 at the time of distributing the maximum bit rate 1603 at the time of distributing the VOD program operation system name 1602 and contents which are specified when limiting, and contents, and an IP multicast method -- and, It comprises six items of distribution IP ports 1606.

0029The RTE information 1017 comprises the RTE name 1701 for identifying RTE, IP address 1702 of the RTE, and three items of the port number 1703, as shown in drawing 3.

0030The contents information 1016 of storage system contents and live system contents, As shown in drawing 4, The channel name 1801 to distribute, The contents name 1802 of the storage system contents to distribute, ***** 1805 of the information on whether distribution is

immediately started immediately after the distribution start time 1803, the distribution finish time 1804, and reservation setting, the periodical distribution 1806 of the information on whether it distributes every day in the time zone of the specified distribution start time 1803 and the distribution finish time 1804, **only distributing like storage system contents, and** Like live system contents, video. When in is distributed recording video in the case of the RTE name 1808 which uses whether it distributes recording for the distribution mode 1807 to specify and the live system contents to distribute, the initialization preset value 1809 of RTE in the case of live system contents, and live system contents carrying out, It comprises an item of 11 of the recording contents name 1810 which is a contents name at the time of making the contents into storage system contents after record, and the recording contents right to access 1811 which is the right to access of the recording contents.

0031The initialization preset value 1809 of the above-mentioned RTE which is initialization setting means of RTE in the contents information 1016 of live system contents, The encoding algorithm 1905 which are the encoding algorithm 1901 which is a coding mode of an image, the resolution 1902 which is a pixel number of an image, the frame number 1903 for 1 second of an image, the bit rate 1904 of an image, and an audio coding mode as shown in drawing 5, an audio stereo, It comprises eight items of the modes 1906, such as a monophonic recording, the sampling rate 1907 in audio digitization, and the audio bit rate 1908.

0032Distribution reservation I/O program 1008 is a flow chart explaining the processing which carries out new production of the channel which sets up distribution reservation, and drawing 6 explains this hereafter.

0033(1) If processing is made to begin, in order that distribution reservation I/O program 1008 may specify the channel setting for which it asks and may add the setting out to a channel list as one channel, it transmits the addition request to the VOD control program 1011 (Steps 1101 and 1102).

0034(2) The VOD control program 1011 receives the demand of the above-mentioned of distribution reservation I/O program 1008, checks that a demand is a channel addition request, and transmits a channel addition request to the distribution reservation control program 1009 (Steps 1103 and 1104).

0035(3) The distribution reservation control program 1009 receives the channel addition request from the VOD control program 1011, A channel is created by specified setting out, and as shown the preset value in drawing 2, after saving at the channel information 1015 of the distribution reservation information 1014, the result is replied to distribution reservation I/O program 1008 via the VOD control program 1011 (Steps 1105-1107).

0036(4) Distribution reservation I/O program 1008 displays the contents of failure, when a channel list is made to give an additional indication and the channel created when an addition request was successful by the above-mentioned reply result goes wrong at it (Step 1108).

0037Distribution reservation I/O program 1008 is a flow chart explaining the processing which carries out new production of the RTE which sets up the distribution reservation using RTE, and drawing 7 explains this hereafter.

0038(1) If processing is made to begin, in order that distribution reservation I/O program 1008 may specify RTE setting out for which it asks and may add the setting out to a RTE list as one RTE, it transmits the addition request to the VOD control program 1011 (Steps 1201 and 1202).

0039(2) The VOD control program 1011 receives the demand of the above-mentioned of distribution reservation I/O program 1008, checks that a demand is a RTE addition request, and transmits a RTE addition request to the real-time coding equipment control program 1010 (Steps 1203 and 1204).

0040(3) The real-time coding equipment control program 1010, Receive the RTE addition request from the VOD control program 1011, and RTE is created by specified setting out, As shown the preset value in drawing 3, after saving to the real-time coding equipment information 1017, the result is replied to distribution reservation I/O program 1008 via the VOD control program 1011 (Steps 1205-1207).

0041(4) Distribution reservation I/O program 1008 displays the contents of failure, when a RTE list is made to give an additional indication and RTE created when an addition request was successful by the above-mentioned reply result goes wrong at it (Step 1208).

0042Distribution reservation I/O program 1008 is a flow chart explaining the processing which

registers distribution reservation into a certain channel, and drawing 8 explains this hereafter.

0043(1) Distribution reservation I/O program 1008, If processing is made to begin, in order to specify distribution reservation setting out of a channel, a distribution time belt, etc. for which it asks and to add the reservation setting to the reservation list of a specified channel, the addition request is transmitted to the VOD control program 1011 (Steps 1301 and 1302).

0044(2) The VOD control program 1011 receives the demand of the above-mentioned of distribution reservation I/O program 1008, checks that a demand is a distribution reservation addition request, and transmits a distribution reservation addition request to the distribution reservation control program 1009 (Steps 1303 and 1304).

0045(3) The distribution reservation control program 1009 receives the distribution reservation addition request from the VOD control program 1011, Create distribution reservation to the specified channel, and the preset value is saved at the contents information 1016 of the distribution reservation information 1014, as shown in drawing 4, After being related with the channel information 1015 of the specified channel, the result is replied to distribution reservation I/O program 1008 via the VOD control program 1011 (Steps 1305-1307).

0046(4) When distribution reservation I/O program 1008 is displayed as a reservation list on the channel which had the created distribution reservation specified when an addition request was successful by the above-mentioned reply result and it fails, display the contents of failure (Step 1308).

0047A request to print out files of the distribution explained by the above-mentioned can be set up per day, and can display these as a reservation list.

0048Drawing 9 is a flow chart explaining the processing in which the distribution reservation control program 1009 carries out a distribution start according to the distribution reservation registered into the channel, and explains this hereafter.

0049(1) The distribution reservation control program 1009 investigates the channel information 1015 and the contents information 1016 of the distribution reservation information 1014 with a certain time interval, and checks whether there are any contents which perform **whether it is reserved so that current time may distribute contents, and *******. When there are not contents reserved and contents which perform *********, after doing nothing but carrying out fixed time lapse again, processing of this step is started (Step 1401).

0050(2) The contents by which distributing at current time is reserved at Step 1401, Or when there are contents of *********, the distribution reservation control program 1009, The contents reserved so that contents may be distributed at current time judge storage system contents or live system contents, and, in the case of live system contents, perform the below-mentioned ********* by drawing 10 (Steps 1402 and 1404).

0051(3) When the contents by which distribution is reserved by the judgment at Step 1402 are storage system contents, the distribution reservation control program 1009 transmits the distribution reservation information 1014 about specification contents, and a distribution request to the VOD control program 1011 (Step 1403).

0052The VOD control program 1011 (4) Step 1403, Or receive the distribution request from the distribution reservation control program 1009 in the processing later mentioned by drawing 10, and it checks that a demand is a distribution starting request, A distribution starting request is transmitted with the distribution reservation information 1014 to the desired VOD program 1012 using the received distribution reservation information 1014 (Step 1405).

0053(5) The VOD program 1012 initializes sets distribution using the received distribution reservation information 1014, Replying a result to the distribution reservation control program 1009 via the VOD control program 1011, the distribution reservation control program 1009 receives this reply, and ends distribution reservation start processing (Steps 1406-1408).

0054Drawing 10 is a flow chart explaining processing until it transmits a distribution request to the VOD control program 1011 from the distribution reservation control program 1009 in case the contents which start distribution reservation are live system contents, and explains this hereafter. This processing is started when the contents distributed by processing of Step 1402 of drawing 9 mentioned above are proved that they are live system contents.

0055(1) In order that a distribution reservation control program may acquire the RTE information 1017 which is information about the live system contents by which distribution reservation is carried out to current time, It asks by transmitting the distribution reservation information 1014

about the specified live system contents to the RTE control program 1010 (Step 1501).

0056(2) The RTE control program 1010 acquires the information about RTE specified using the received distribution reservation information 1014 from the RTE information 1017, and replies the result to the distribution reservation control program 1009 (Steps 1502 and 1503).

0057(3) The distribution reservation control program 1009 asks the RTE control program 1010 the working state of the RTE using the received RTE information, after receiving the RTE information replied from the RTE control program 1010 (Step 1504).

0058(4) The RTE control program 1010 acquires the working state of RTE specified by the inquiry from the distribution reservation control program 1009, and replies the working state to the distribution reservation control program 1009 (Steps 1505 and 1506).

0059(5) The distribution reservation control program 1009 transmits the distribution reservation information 1014 about the RTE information replied from the RTE control program 1010, a RTE working state, and the specified RTE contents, and a distribution request to the VOD control program 1011 (Step 1507).

0060(6) The VOD control program 1011 transmits an activate request to RTE specified using the information received from the distribution reservation control program 1009, and receives the reply of a starting success from the RTE. The VOD control program 1011 transmits an initialization request to RTE specified using the received information, and receives the reply of an initialization success from the RTE. Then, it progresses to processing of Step 1405 of drawing 9 mentioned above (Steps 1508-1511).

0061When drawing 11 executes distribution reservation I/O program 1008, it is a figure showing the example of a screen displayed on the display 1001. This example of a screen controls the distribution reservation control program 1009 and the RTE control program 1010 which were explained by the above-mentioned, When distribution reservation I/O program 1008 which is a processing program which equipped dialog environment with the system shown in an administrator and drawing 1 is executed, it is an example of a screen displayed on the display 1001.

0062Whenever a channel name and a RTE name are created by the display screen, it is displayed on it as a list, and a belt is displayed on the time zone which the channel specified that it sets up distribution reservation to a certain channel. The schedule for **of the specified day** one day is displayed by a distribution reservation display displaying the request to print out files for one day (the following, schedule), and specifying the date. It is respectively displayed also about the operation situation of a RTE list.

0063Drawing 12 is a block diagram showing the composition of the contents distribution system by other embodiments of this invention. Other embodiments of this invention apply this invention to distribution of video. As for a VOD system and 2003, in drawing 12, 2001 is a **personal computer and 2006** networks a viewing-and-listening terminal unit, and 2004 and 2005 RTE and 2002.

0064Other embodiments of this invention shown in drawing 12 the video acquired from imaging devices, such as a camera, one by one And RTE2001 coded in an instant, The VOD system 2002 which distributes the dynamic image data stored to the user who emitted the viewing-and-listening demand which is a VOD system-function part of the video distribution system 1000 of drawing 1, The viewing-and-listening terminal unit 2003 which has information reading means, such as a WEB browser used when a televiewer views and listens to the video which the VOD system 2002 provides, the personal computer (PC) which divides and executes the processing program of the video distribution reservation function part which constitutes the video distribution system 1000 of drawing 1 -- it is connected to the network 2006 and 2004 and 2005 are constituted.

0065In the above-mentioned, PC2004 executes the distribution reservation control program 1009 and the RTE control program 1010, and PC2005 executes distribution reservation I/O program 1008. It is shown that the dotted line currently described in PC2005 grade can be existed by plural equipments.

0066By taking the above composition, other embodiments of this invention do not need to do distribution reservation setting-out work with the video distribution system 1000, and it becomes possible to carry out on PC2005 connected to the network 2006. It also becomes possible by installing two or more such PC2005 to do distribution reservation setting-out work at the place where two or more administrators differ.

0067As mentioned above, although the suitable embodiment of this invention was described, this

invention is not limited only to the embodiment mentioned above, and can be carried out by different various modes from the above-mentioned.

0068Various kinds of programs in the embodiment of this invention mentioned above can be stored in recording media, such as FD, CDROM, MO, and DVD, can be provided, and can carry out this invention using these.

0069According to the embodiment of this invention mentioned above, the contents can be distributed in the time zone set up beforehand, without distinguishing storage system contents and live system contents, and to a viewing-and-listening demand to the storage system contents from a televiewer, priority can be given and the contents can be distributed. Even if according to the embodiment of this invention it becomes possible to perform distribution reservation related with sets distribution or its sets distribution via a network and is not in front of a video distribution system and its video distribution reservation controlling device, The sets distribution, distribution reservation setting out, and its setting-out inspection of contents can be performed from the terminal through a network.

0070When according to the embodiment of this invention mentioned above becoming possible to carry out only about the day which specified setting out and a display of distribution reservation by making the date function preselection capability equip and managing sets distribution and distribution reservation, it becomes possible to set up easily and exactly, without getting the contents confused.

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Effect of the InventionAccording to this invention, as explained above, the contents can be distributed in the time zone set up beforehand, without distinguishing storage system contents and live system contents, and to a viewing-and-listening demand to the storage system contents from a televiewer, priority can be given and the contents can be distributed.

Field of the InventionThis invention relates to the storage which stored the distribution system and message distribution processing program of contents, and distribute contents, such as video, to a televiewer especially according to reservation setting, and. It is related with the distribution system of the contents which distribute the contents demanded regardless of distribution reservation to the viewing-and-listening demand from a televiewer to recorded contents already.

Description of the Prior ArtThe storage system contents in which the present television broadcasting and a radio broadcast are mentioned a priori like a drama and which are broadcast according to a broadcasting-hours belt, Contents are changed and broadcast according to the broadcasting-hours belt which was able to determine the live system contents which broadcast the video photoed with the camera according to the broadcasting-hours belt like news as it is in real time. For this reason, regardless of the kind of those contents, a televiewer receives that broadcast with television or radio, and is viewing and listening to video and a sound.

0003On the other hand on the Internet, the WEB server which provides all the places in the world with various information using World Wide Web (WWW) is installed now, The user in whom an Internet access is possible accesses the WEB server which wants to acquire information always using the information inspection software called a WEB browser, and if he is a low bit rate besides a text, a still picture, and a sound, he can access the information on video etc.

0004Also in public institutions in connection with use increase of such the Internet and WWW, such as a company and a university, The computer network called the intranet which introduced the tool and WWW standards of the Internet which spread through the network in a section, an enterprise network, and the whole intramural network has been built quickly. WEB by which intranet is connected to the network in a company and a university It is built by the server and to the WEB server. Documents, such as an indicator of the technical support information of a company or a company, a procedure manual, and a telephone directory, are saved, and the user can access all the information of a company or a university by perusing the document on the WEB server using a WEB browser.

0005In a situation which was mentioned above, it follows on progress of the transmission art of video and compression technology, Computer networks, such as intranet and the Internet, are used and development of the video-on-demand (henceforth VOD) system which enabled it to view and listen to video to see when a user wants to see has been furthered. And the user who uses this VOD system, By accessing the page in which the video list which can provide the VOD system of a WEB server is stored by the WEB browser, and choosing one of the contents to view and listen from the list of video on the page, when viewing and listening, Distribution of video can be received from a WEB server.

0006However, a WEB server is difficult to transmit the video of a number Mb/s grade or the high bit rate beyond it to real time via a network for the reasons of that distribution of video is not the 1st purpose, a network throughput having a limit.

0007Then, the VOD system which separated the WEB server holding the video list which can provide a VOD system, and the VOD server which actually distributes video is indicated to them and proposed by JP,11-88862,A etc. in recent years, for example. By the user who uses this VOD system accessing a WEB server by a WEB browser, perusing a video list, and choosing dynamic image data to see out of it, Transmission of only information can be received from the VOD server which distributes the video, and the call of video can be realized promptly.

Effect of the InventionAccording to this invention, as explained above, the contents can be distributed in the time zone set up beforehand, without distinguishing storage system contents and live system contents, and to a viewing-and-listening demand to the storage system contents from a televiewer, priority can be given and the contents can be distributed.

Problem(s) to be Solved by the InventionThere are the following problems in this conventional technology.

0009In the conventional technology mentioned above, television broadcasting and a radio broadcast, Are only distributing contents, such as video, to a designated time belt, have the problem that contents cannot be distributed according to a televiewer's viewing-and-listening demand, and a VOD system, According to the viewing-and-listening demand from a televiewer, it is only distributing video and has the problem that contents cannot be distributed according to the schedule decided beforehand.

0010Without distinguishing storage system contents and live system contents, according to the distribution reservation set up beforehand, can distribute the purpose of this invention to a televiewer, and it receives a viewing-and-listening demand to the storage system contents from a televiewer, It is in providing the distribution system of the contents which made it possible to give priority to the viewing-and-listening demand regardless of the distribution reservation, and to distribute the storage system contents.

0011The purpose of this invention The distribution bit rate of video, a distribution protocol, Sets distribution (the following, channel), such as a distribution destination, is created, and it is in providing the contents distribution system which has a distribution reservation setting up function which sets up beforehand the time zone which distributes storage system contents and live system contents for every channel.

0012When the purpose of this invention performs the distribution reservation setting out, it has the function to set up the distribution reservation related with a channel or its channel via the network, and. It is in providing the contents distribution system which has a function performed only about the day which specified setting out and a display of distribution reservation.

Means for Solving the ProblemIn a distribution system with which said purpose distributes storage system contents memorized beforehand and live system contents processed by real-time coding equipment according to this invention, A means to carry out reservation setting of the time

zone beforehand, and to distribute said storage system contents and live system contents to a televiewer, By having a means to give priority to said viewing-and-listening demand regardless of said setting out, and to distribute specified storage system contents, to a viewing-and-listening demand to storage system contents from a televiewer, The distribution bit rate of said contents, a distribution protocol, and a means to create one or more sets distribution information which comprises a distribution destination, It is attained by having a means which carries out reservation setting of the time zone which distributes storage system contents or live system contents for said every sets distribution information beforehand.

0014By having the above-mentioned composition, this invention can distribute the contents in a time zone set up beforehand, without distinguishing storage system contents and live system contents, and to a viewing-and-listening demand to storage system contents from a televiewer, priority can be given to it and it can distribute the contents.

0015Each means mentioned above can be built with a processing program on a computer, and can be installed in a computer through a medium of various gestalten, such as memory storage by various kinds of disk type recording media, a semiconductor memory device, and a communication network.

0016

Embodiment of the InventionHereafter, a drawing explains the embodiment of the distribution system of the contents by this invention in detail.

0017Drawing 1 is a block diagram showing the composition of the contents distribution system by one embodiment of this invention. The embodiment of this this invention applies this invention to distribution of video. In drawing 1, a video distribution system and 1001 display 1000, CPU and 1003 for 1002 a keyboard and 1004 a mouse and 1005 A network interface, 1006 a bus and 1007 a memory and 1008 A distribution reservation I/O program, A distribution reservation control program and 1010 1009 A real-time coding equipment control program, 1011 a VOD control program and 1012 a VOD program and 1013 Memory storage, 1014 -- distribution reservation information and 1015 -- as for dynamic image data and 1019, contents information and 1017 are a **viewing-and-listening terminal unit and 1021** networks real-time coding equipment and 1020 real-time coding equipment information and 1018 channel information and 1016.

0018As shown in drawing 1, the video distribution system 1000, The display 1001 which is an output device, The network interface 1005, command which are the interfaces for input and output for the keyboard 1003, the mouse 1004, and the video distribution system 1000 which are CPU1002 for system control and an input device to perform transmission and reception for data with an external device. Or it has the memory 1007 which memorizes the program for performing processing by bus **for delivering and receiving data** 1006, and CPU1002, etc., and the memory storage 1013 which stores various processing data, and is constituted. And this video distribution system 1000, The video acquired from imaging devices, such as a camera, one by one And the real-time coding equipment 1019 coded in an instant. It is connected with the viewing-and-listening terminal unit 1020 which has information reading means, such as a WEB browser used when a televiewer views and listens to (it being hereafter called RTE) and the video which the video distribution system 1000 provides, by the networks 1021, such as the Internet. The dotted line currently described in the viewing-and-listening terminal unit 1020 grade shows that two or more these devices are able to exist.

0019It is stored in the memory storage 1013, and according to the command of CPU1002, it is transmitted to the memory 1007, and the processing program for performing the function about this invention is stored in it. These programs are classified into two, a video distribution reservation function part and a VOD system-function part, according to a function. A video distribution reservation function part is constituted by the three programs 1008, i.e., a distribution reservation I/O program, the distribution reservation control program 1009, and the real-time coding equipment control program 1010. A VOD system-function part is constituted by two programs of the VOD control program 1011 and the VOD program 1012. The distribution reservation information 1014 which consists of the channel information 1015 and the contents information 1016, the real-time coding equipment information 1017, and the dynamic image data 1018 are stored in the memory storage 1013.

0020Above-mentioned distribution reservation I/O program 1008, Set up new production, change, deletion, etc. to the real-time coding equipment control program, the two programs 1009, i.e., the

distribution reservation control program, which are mentioned later, 1010, and distribution reservation. It is a program which controls the display which can recognize the distribution reservation setting condition clearly, and is a program which provides the dialog environment of an administrator and a graphic display system.

0021The distribution reservation control program 1009 holds distribution reservation setting out from distribution reservation I/O program 1008. It is a program to which communicate with the VOD system-function part which comprises two programs, i.e., the VOD control program 1011 and the VOD program 1012, later mentioned according to the distribution reservation setting out, and a start and end of video distribution are made to carry out. Distribution reservation setting out from distribution reservation I/O program 1008 is stored in the distribution reservation information 1014 on the memory storage 1013. The distribution reservation information 1014 is divided and stored in the contents information 1016 which is information, including the channel information 1015 which describes the channel which is sets distribution peculiar to a VOD system-function part, the actually distributed storage system contents, and live system contents, peculiar to contents.

0022The real-time coding equipment control program 1010 is a program which replies the RTE setup information which held setting out about RTE from distribution reservation I/O program 1008, and was specified according to the demand from the distribution reservation control program 1009. The RTE setup information from distribution reservation I/O program 1008 is stored in the real-time coding equipment information 1017 on the memory storage 1013.

0023The VOD control program 1011 which constitutes a VOD system-function part is a program which is performing management at the time of providing the service which distributes the dynamic image data 1018 stored to the televiewer who emitted the viewing-and-listening demand. The VOD control program 1011 has managed not only the management about the televiewer who emitted the viewing-and-listening demand but the distribution start and terminating request from the distribution reservation control program 1009 of the video distribution system 1000.

0024The VOD program 1012 is a program which actually distributes the dynamic image data 1018 according to the directions from the VOD control program 1011.

0025The video distribution system 1000, When CPU1002 performs processing according to distribution reservation I/O program 1008 mentioned above, the distribution reservation control program 1009, the real-time coding equipment control program 1010, the VOD control program 1011, and the VOD program 1012. The function about this invention is performed.

0026Next, the composition of the table which stores various kinds of information used by each program mentioned above in processing by the embodiment of this invention is explained.

0027The figure showing the composition of the table where drawing 2 stored the component of the channel information 1015, The figure showing the composition of the table where drawing 3 stored the component of the RTE information 1017, The figure and drawing 5 in which the composition of the table where drawing 4 stored the component of the contents information 1016 of storage system contents and live system contents is shown are a figure showing the composition of the table which stored the initialization setting means of RTE in the contents information 1016 of live system contents.

0028As shown in drawing 2, the channel information 1015, A channel. The channel name 1601 for identifying, and contents. The system name in which the VOD program 1012 to distribute works. distribution IP address 1605 at the time of distributing with the distribution protocol 1604 at the time of distributing the maximum bit rate 1603 at the time of distributing the VOD program operation system name 1602 and contents which are specified when limiting, and contents, and an IP multicast method -- and, It comprises six items of distribution IP ports 1606.

0029The RTE information 1017 comprises the RTE name 1701 for identifying RTE, IP address 1702 of the RTE, and three items of the port number 1703, as shown in drawing 3.

0030The contents information 1016 of storage system contents and live system contents, As shown in drawing 4, The channel name 1801 to distribute, The contents name 1802 of the storage system contents to distribute, ***** 1805 of the information on whether distribution is immediately started immediately after the distribution start time 1803, the distribution finish time 1804, and reservation setting, the periodical distribution 1806 of the information on whether it distributes every day in the time zone of the specified distribution start time 1803 and the distribution finish time 1804, **only distributing like storage system contents, and** Like live system contents, video. **When is distributed recording video in the case of the RTE name**

1808 which uses whether it distributes recording for the distribution mode **1807** to specify and the live system contents to distribute, the initialization preset value **1809** of RTE in the case of live system contents, and live system contents carrying out, It comprises an item of 11 of the recording contents name **1810** which is a contents name at the time of making the contents into storage system contents after record, and the recording contents right to access **1811** which is the right to access of the recording contents.

0031The initialization preset value **1809** of the above-mentioned RTE which is initialization setting means of RTE in the contents information **1016** of live system contents, The encoding algorithm **1905** which are the encoding algorithm **1901** which is a coding mode of an image, the resolution **1902** which is a pixel number of an image, the frame number **1903** for 1 second of an image, the bit rate **1904** of an image, and an audio coding mode as shown in drawing 5, an audio stereo, It comprises eight items of the modes **1906**, such as a monophonic recording, the sampling rate **1907** in audio digitization, and the audio bit rate **1908**.

0032Distribution reservation I/O program **1008** is a flow chart explaining the processing which carries out new production of the channel which sets up distribution reservation, and drawing 6 explains this hereafter.

0033(1) If processing is made to begin, in order that distribution reservation I/O program **1008** may specify the channel setting for which it asks and may add the setting out to a channel list as one channel, it transmits the addition request to the VOD control program **1011** (Steps **1101** and **1102**).

0034(2) The VOD control program **1011** receives the demand of the above-mentioned of distribution reservation I/O program **1008**, checks that a demand is a channel addition request, and transmits a channel addition request to the distribution reservation control program **1009** (Steps **1103** and **1104**).

0035(3) The distribution reservation control program **1009** receives the channel addition request from the VOD control program **1011**, A channel is created by specified setting out, and as shown the preset value in drawing 2, after saving at the channel information **1015** of the distribution reservation information **1014**, the result is replied to distribution reservation I/O program **1008** via the VOD control program **1011** (Steps **1105**-**1107**).

0036(4) Distribution reservation I/O program **1008** displays the contents of failure, when a channel list is made to give an additional indication and the channel created when an addition request was successful by the above-mentioned reply result goes wrong at it (Step **1108**).

0037Distribution reservation I/O program **1008** is a flow chart explaining the processing which carries out new production of the RTE which sets up the distribution reservation using RTE, and drawing 7 explains this hereafter.

0038(1) If processing is made to begin, in order that distribution reservation I/O program **1008** may specify RTE setting out for which it asks and may add the setting out to a RTE list as one RTE, it transmits the addition request to the VOD control program **1011** (Steps **1201** and **1202**).

0039(2) The VOD control program **1011** receives the demand of the above-mentioned of distribution reservation I/O program **1008**, checks that a demand is a RTE addition request, and transmits a RTE addition request to the real-time coding equipment control program **1010** (Steps **1203** and **1204**).

0040(3) The real-time coding equipment control program **1010**, Receive the RTE addition request from the VOD control program **1011**, and RTE is created by specified setting out, As shown the preset value in drawing 3, after saving to the real-time coding equipment information **1017**, the result is replied to distribution reservation I/O program **1008** via the VOD control program **1011** (Steps **1205**-**1207**).

0041(4) Distribution reservation I/O program **1008** displays the contents of failure, when a RTE list is made to give an additional indication and RTE created when an addition request was successful by the above-mentioned reply result goes wrong at it (Step **1208**).

0042Distribution reservation I/O program **1008** is a flow chart explaining the processing which registers distribution reservation into a certain channel, and drawing 8 explains this hereafter.

0043(1) Distribution reservation I/O program **1008**, If processing is made to begin, in order to specify distribution reservation setting out of a channel, a distribution time belt, etc. for which it asks and to add the reservation setting to the reservation list of a specified channel, the addition request is transmitted to the VOD control program **1011** (Steps **1301** and **1302**).

0044(2) The VOD control program 1011 receives the demand of the above-mentioned of distribution reservation I/O program 1008, checks that a demand is a distribution reservation addition request, and transmits a distribution reservation addition request to the distribution reservation control program 1009 (Steps 1303 and 1304).

0045(3) The distribution reservation control program 1009 receives the distribution reservation addition request from the VOD control program 1011, Create distribution reservation to the specified channel, and the preset value is saved at the contents information 1016 of the distribution reservation information 1014, as shown in drawing 4, After being related with the channel information 1015 of the specified channel, the result is replied to distribution reservation I/O program 1008 via the VOD control program 1011 (Steps 1305-1307).

0046(4) When distribution reservation I/O program 1008 is displayed as a reservation list on the channel which had the created distribution reservation specified when an addition request was successful by the above-mentioned reply result and it fails, display the contents of failure (Step 1308).

0047A request to print out files of the distribution explained by the above-mentioned can be set up per day, and can display these as a reservation list.

0048Drawing 9 is a flow chart explaining the processing in which the distribution reservation control program 1009 carries out a distribution start according to the distribution reservation registered into the channel, and explains this hereafter.

0049(1) The distribution reservation control program 1009 investigates the channel information 1015 and the contents information 1016 of the distribution reservation information 1014 with a certain time interval, and checks whether there are any contents which perform **whether it is reserved so that current time may distribute contents, and *******. When there are not contents reserved and contents which perform ***** , after doing nothing but carrying out fixed time lapse again, processing of this step is started (Step 1401).

0050(2) The contents by which distributing at current time is reserved at Step 1401, Or when there are contents of ***** , the distribution reservation control program 1009, The contents reserved so that contents may be distributed at current time judge storage system contents or live system contents, and, in the case of live system contents, perform the below-mentioned ***** by drawing 10 (Steps 1402 and 1404).

0051(3) When the contents by which distribution is reserved by the judgment at Step 1402 are storage system contents, the distribution reservation control program 1009 transmits the distribution reservation information 1014 about specification contents, and a distribution request to the VOD control program 1011 (Step 1403).

0052The VOD control program 1011 (4) Step 1403, Or receive the distribution request from the distribution reservation control program 1009 in the processing later mentioned by drawing 10, and it checks that a demand is a distribution starting request, A distribution starting request is transmitted with the distribution reservation information 1014 to the desired VOD program 1012 using the received distribution reservation information 1014 (Step 1405).

0053(5) The VOD program 1012 initializes sets distribution using the received distribution reservation information 1014, Replying a result to the distribution reservation control program 1009 via the VOD control program 1011, the distribution reservation control program 1009 receives this reply, and ends distribution reservation start processing (Steps 1406-1408).

0054Drawing 10 is a flow chart explaining processing until it transmits a distribution request to the VOD control program 1011 from the distribution reservation control program 1009 in case the contents which start distribution reservation are live system contents, and explains this hereafter. This processing is started when the contents distributed by processing of Step 1402 of drawing 9 mentioned above are proved that they are live system contents.

0055(1) In order that a distribution reservation control program may acquire the RTE information 1017 which is information about the live system contents by which distribution reservation is carried out to current time, It asks by transmitting the distribution reservation information 1014 about the specified live system contents to the RTE control program 1010 (Step 1501).

0056(2) The RTE control program 1010 acquires the information about RTE specified using the received distribution reservation information 1014 from the RTE information 1017, and replies the result to the distribution reservation control program 1009 (Steps 1502 and 1503).

0057(3) The distribution reservation control program 1009 asks the RTE control program 1010 the

working state of the RTE using the received RTE information, after receiving the RTE information replied from the RTE control program 1010 (Step 1504).

0058(4) The RTE control program 1010 acquires the working state of RTE specified by the inquiry from the distribution reservation control program 1009, and replies the working state to the distribution reservation control program 1009 (Steps 1505 and 1506).

0059(5) The distribution reservation control program 1009 transmits the distribution reservation information 1014 about the RTE information replied from the RTE control program 1010, a RTE working state, and the specified RTE contents, and a distribution request to the VOD control program 1011 (Step 1507).

0060(6) The VOD control program 1011 transmits an activate request to RTE specified using the information received from the distribution reservation control program 1009, and receives the reply of a starting success from the RTE. The VOD control program 1011 transmits an initialization request to RTE specified using the received information, and receives the reply of an initialization success from the RTE. Then, it progresses to processing of Step 1405 of drawing 9 mentioned above (Steps 1508-1511).

0061When drawing 11 executes distribution reservation I/O program 1008, it is a figure showing the example of a screen displayed on the display 1001. This example of a screen controls the distribution reservation control program 1009 and the RTE control program 1010 which were explained by the above-mentioned, When distribution reservation I/O program 1008 which is a processing program which equipped dialog environment with the system shown in an administrator and drawing 1 is executed, it is an example of a screen displayed on the display 1001.

0062Whenever a channel name and a RTE name are created by the display screen, it is displayed on it as a list, and a belt is displayed on the time zone which the channel specified that it sets up distribution reservation to a certain channel. The schedule for **of the specified day** one day is displayed by a distribution reservation display displaying the request to print out files for one day (the following, schedule), and specifying the date. It is respectively displayed also about the operation situation of a RTE list.

0063Drawing 12 is a block diagram showing the composition of the contents distribution system by other embodiments of this invention. Other embodiments of this invention apply this invention to distribution of video. As for a VOD system and 2003, in drawing 12, 2001 is a **personal computer and 2006** networks a viewing-and-listening terminal unit, and 2004 and 2005 RTE and 2002.

0064Other embodiments of this invention shown in drawing 12 the video acquired from imaging devices, such as a camera, one by one And RTE2001 coded in an instant, The VOD system 2002 which distributes the dynamic image data stored to the user who emitted the viewing-and-listening demand which is a VOD system-function part of the video distribution system 1000 of drawing 1, The viewing-and-listening terminal unit 2003 which has information reading means, such as a WEB browser used when a televiewer views and listens to the video which the VOD system 2002 provides, the personal computer (PC) which divides and executes the processing program of the video distribution reservation function part which constitutes the video distribution system 1000 of drawing 1 -- it is connected to the network 2006 and 2004 and 2005 are constituted.

0065In the above-mentioned, PC2004 executes the distribution reservation control program 1009 and the RTE control program 1010, and PC2005 executes distribution reservation I/O program 1008. It is shown that the dotted line currently described in PC2005 grade can be existed by plural equipments.

0066By taking the above composition, other embodiments of this invention do not need to do distribution reservation setting-out work with the video distribution system 1000, and it becomes possible to carry out on PC2005 connected to the network 2006. It also becomes possible by installing two or more such PC2005 to do distribution reservation setting-out work at the place where two or more administrators differ.

0067As mentioned above, although the suitable embodiment of this invention was described, this invention is not limited only to the embodiment mentioned above, and can be carried out by different various modes from the above-mentioned.

0068Various kinds of programs in the embodiment of this invention mentioned above can be stored in recording media, such as FD, CDROM, MO, and DVD, can be provided, and can carry out this invention using these.

0069According to the embodiment of this invention mentioned above, the contents can be distributed in the time zone set up beforehand, without distinguishing storage system contents and live system contents, and to a viewing-and-listening demand to the storage system contents from a televiewer, priority can be given and the contents can be distributed. Even if according to the embodiment of this invention it becomes possible to perform distribution reservation related with sets distribution or its sets distribution via a network and is not in front of a video distribution system and its video distribution reservation controlling device, The sets distribution, distribution reservation setting out, and its setting-out inspection of contents can be performed from the terminal through a network.

0070When according to the embodiment of this invention mentioned above becoming possible to carry out only about the day which specified setting out and a display of distribution reservation by making the date function preselection capability equip and managing sets distribution and distribution reservation, it becomes possible to set up easily and exactly, without getting the contents confused.

0071

Brief Description of the Drawings

Drawing 1It is a block diagram showing the composition of the contents distribution system by one embodiment of this invention.

Drawing 2It is a figure showing the composition of the table which stored the component of channel information.

Drawing 3It is a figure showing the composition of the table which stored the component of RTE information.

Drawing 4It is a figure showing the composition of the table which stored the component of the contents information of storage system contents and live system contents.

Drawing 5It is a figure showing the composition of the table which stored the initialization setting means of RTE in the contents information of live system contents.

Drawing 6A distribution reservation I/O program is a flow chart explaining the processing which carries out new production of the channel which sets up distribution reservation.

Drawing 7A distribution reservation I/O program is a flow chart explaining the processing which carries out new production of the RTE which sets up the distribution reservation using RTE.

Drawing 8It is a flow chart explaining the processing which registers distribution reservation into a channel with a distribution reservation I/O program.

Drawing 9It is a flow chart explaining the processing in which a distribution reservation control program carries out a distribution start according to the distribution reservation registered into the channel.

Drawing 10It is a flow chart explaining processing until it transmits a distribution request to a VOD control program from a distribution reservation control program in case the contents which start distribution reservation are live system contents.

Drawing 11When a distribution reservation I/O program is executed, it is a figure showing the example of a screen displayed on a display.

Drawing 12It is a block diagram showing the composition of the contents distribution system by other embodiments of this invention.

Description of Notations

1000 Video distribution system

1001 Display

1002 CPU

1003 Keyboard

1004 Mouse

1005 Network interface

1006 Bus

1007 Memory

1008 Distribution reservation I/O program

1009 Distribution reservation control program

1010 RTE control program
1011 VOD control program
1012 VOD program
1013 Memory storage
1014 Distribution reservation information
1015 Channel information
1016 Contents information
1017 RTE information
1018 Dynamic image data
1019 RTE
1020 Viewing-and-listening terminal unit
1021 and 2006 Network
2001 RTE
2002 VOD system
2003 Viewing-and-listening terminal unit
2004 and 2005 Personal computer

Drawing 1

For drawings please refer to the original document.

Drawing 2

For drawings please refer to the original document.

Drawing 3

For drawings please refer to the original document.

Drawing 4

For drawings please refer to the original document.

Drawing 5

For drawings please refer to the original document.

Drawing 11

For drawings please refer to the original document.

Drawing 12

For drawings please refer to the original document.

Drawing 6

For drawings please refer to the original document.

Drawing 7

For drawings please refer to the original document.

Drawing 8

For drawings please refer to the original document.

Drawing 9

For drawings please refer to the original document.

Drawing 10

For drawings please refer to the original document.

For drawings please refer to the original document.
